Filing Date: December 31, 2003

Title: DATA AUTHENTICATION AND TAMPER DETECTION

## REMARKS

This responds to the Office Action mailed on <u>July 10, 2008</u>. Claims 1, 5, 13, 24 and 28 are amended. Claims 1-35 are pending in this application.

## §102 Rejection of the Claims

Claims 1-8 and 13-31 were rejected under 35 U.S.C. § 102(e) for anticipation by Grawrock et al. (hereinafter referred to as Grawrock) U.S. Patent No. 2002/0080974 B2.

In the Response to Arguments section, the Office indicated that Grawrock teaches generating a digital signature based on an ephemeral value at 0028-0029, 0034 and steps 310, 315 in Fig. 3. Applicant respectfully traverses. Grawrock at 0028-0029 relates to a digital signature. However, this digital signature is not signed with a key that is equal to an ephemeral value. In contrast, this digital signature is signed "with a private key (CAPRK) of a certification authority . . . " Grawrock at [0028]. In Grawrock, the CAPRK is not defined as an ephemeral value. Rather, the EUPUK and the EAPRK are keys that are equal to an ephemeral value. Grawrock at 0034 relates to performing a hash operation "on the EAPUK . . ", not using the EAPUK to perform the hash. In other words, the EAPUK is data that is being hashed. Grawrock at steps 310 and 315 of Fig. 3 relate generally to ephemeral keys (EAPUK and EAPRK). However, this section of Grawrock does not disclose generating a digital signature using a key that has a value equal to an ephemeral value.

Further, in the Response to Arguments section, the Office indicated the following:

[T]he examiner reasonably interpreted using ephemeral value as a cryptographic key to perform encryption equivalent to use an ephemeral value as a cryptographic key generate a digital signature or hash.

Office Action at page 2.

Applicant respectfully traverses. Encryption does not equal digital signature generation. Encryption is a reversible operation used to protect the data. Digital signature generation is used to authenticate the data. Protection does not equal authentication. To provide additional differences, Applicant has amended claims 1, 5, 13, 24 and 28 such that data authentication is Filing Date: December 31, 2003
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performed using an key that has a value equal to an ephemeral value. For example, among the differences, claim 1 recites "performing data authentication, wherein performing the data authentication comprises generating a digital signature of the data with a cryptographic key having a value that is equal to the ephemeral value." (emphasis added).

Because Grawrock does not disclose all of the claim limitations, Applicant respectfully submits that the rejection of claims 1, 5, 13, 24 and 28 under 35 USC § 102 has been overcome. Because claims 2-4, 6-8, 14-19, 25-27 and 29-31 depend from and further define claims 1, 5, 13, 24 and 28, respectively, Applicant respectfully submits that the rejection of claims 2-4, 6-8, 14-19, 25-27 and 29-31 under 35 USC § 102 has been overcome.

## §103 Rejection of the Claims

Claims 9-12 and 32-35 were rejected under 35 USC § 103(a) as being unpatentable over Johnson, P.K. et al. (hereinafter referred to as Johnson) (WO 00/18162) in view of Grawrock et al. (hereinafter referred to as Grawrock) US Patent No. 2002/0080974 B2. Applicant respectfully traverses. Neither Johnson nor Grawrock (alone or in combination) discloses or suggests all of the claim limitations.

Among the differences, claims 9 and 32 recite "generating a second digital signature with a cryptographic key having a value that is equal to the random number." In the Response to Arguments section, the Office indicated that Grawrock teaches this limitation at 0033-0034 and Fig. 5 steps 530, 540. Applicant respectfully traverses. These section of Grawrock relate to performing a hash operation "on the EAPUK...", not using the EAPUK to perform the hash. Further, Applicant respectfully submits that there is no suggestion to modify Grawrock to generate a digital signature. In contrast, in order to be operative, Grawrock requires encryption/decryption of the data using a cryptographic key having a value that is equal to a random number such that the data can be reproduced so that the static markers can be verified. In contrast, claims 9 and 32 recite the generating of a digital signature with such a cryptographic key. However, as noted above, the digital signature cannot be used to reproduce the encrypted data. Rather, the digital signature is used to authenticate.

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Because neither Johnson nor Grawrock (alone or in combination) discloses or suggests all of the claim limitations, Applicant respectfully submits that the rejection of claims 9 and 32 under 35 USC § 103 has been overcome. Because claims 10-12 and 33-35 depend from and further define claims 9 and 32, respectively, Applicant respectfully submits that the rejection of claims 101-2 and 33-35 under 35 USC § 103 has been overcome.

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## CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 373-6972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

Respectfully submitted,

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Date 10-7-2008

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filting system EFS-Web, and is addressed to: Mail Stop RCE, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this

day of October 2008.

Signature

Name